

Wireless ZT Installation, Programming, and Authorization

This Cheat Sheet is broken into 3 parts.

1. **Wireless hardware installation**
2. **ZT assignments**
3. **ZT Authorization**

1. Wireless Hardware Installation

ZT Power

Power to the ZT's can be supplied via a PW122 installed in the **same** PIM as the CSI cards or can be provided locally at the ZT itself with a plug in power supply.

Note:- With a local power supply at the ZT cable distance between the ZT and PBX is greatly increased. See the NEAX IPS WCS system manual for details.

CSI LT card

The NEAX IPS supports 3 different line cards (CSI) for connection to the ZT's.

- PN-2CSIA supports 2 ZT's ST interface only (4 wire).
- PN-2CSIH supports 2 ZT's U interface only (2 wire).
- PN-4CSIA-A supports 4 ZT's U interface only (2 wire).

The 2CSI cards use 1 LT slot and take 8 FP time slots. The 4CSI uses up 2 LT slots and takes 16 FP time slots.

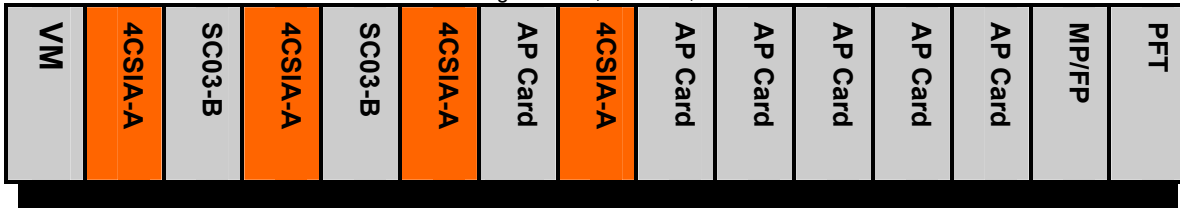
CSH AP card

The NEAX IPS supports 3 different controller cards (CSH) for the ZTs. Each of these cards will support up to 8 ZT's. It is recommended the SC03 reside in the same PIM as the CSI card/cards it controls.

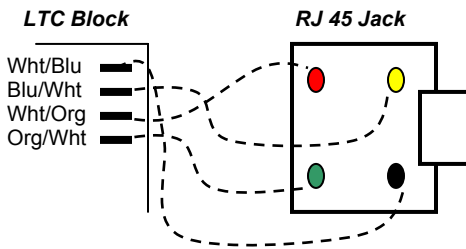
- PN-SC03 Must be SC2603 CJ1.01 or higher for ST interface ZT's only (4 wire).
- PN-SC03-A For ST interface only (4 wire).
- PN-SC03-B For ST and U interface (2 and 4 wire).

Note:- SC03-B card must be firmware revision F2 1.00 or higher for U interface (use CM F85>XX03,XX04,XX05 to check).

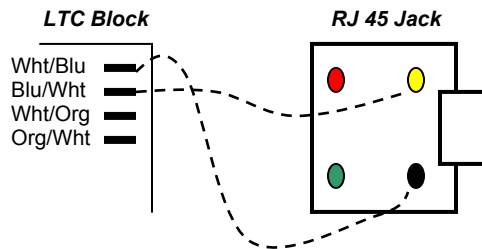
Card Placement (4CSI) Note:- AP cards placed to the right of the 4CSIA must not have PCM digital lines E.g 24PRTA, 24CCTA, 4BRTA-A etc.



ZT Wiring ST Interface



ZT Wiring U interface



In each diagram a straight through patch cord would be used from the RJ45 to the ZT.

2. Wireless ZT Programming

1. **CM 050>XX>23** Where XX = the sense wheel setting on the SC03 card.
2. **CM 14>XXXXX>EE3ZZZ** Where XXXXX = the LEN and ZZZ = ZT# (000~127). ZT's are assigned to levels 0 and 2 of the LT slot.
3. **CM 0618>XXYY>ZZZ** Where XX = the sense wheel of the SC03, YY = the channel number of the SC03 (00~03), and ZZZ = the first ZT (000~127) of each LT slot accommodating ZT assignments. Each SC03 has 4 channels (00~03). Each channel controls 2 ZT's. Only the first ZT in each LT slot is assigned to each of the SC03 channels. See **Programming Example** below.
4. **CM AD00>XXX>YYYYY** Where XXX = the ZT number (000~127) and YYYYY = the area for each ZT starting with 00000. Note:- In a multi-story building this assignment should be broken into Calling Area No's and Group Area No's. as per the WCS System Manual.
5. **CM AD19>ZT No.>XX** Where the ZT No. = 000~127 and XX = 00 for ZTII-S, 00 for ZTII-U and 15 for ZTII-S running Mode 1 original Shamrock ZT's (1 antenna).
6. **CM AD24>ZT No.>XX** Where ZT No. = 000~127 and XX = 15 for ZT-S and 00 for ZTII-U.
7. **CM AE00>03>003** Assign the Nation Code for Nth America.
8. **CM AE15>00>0103050000** Where 1, 3, and 5 is the carrier pattern selected. Pattern 2, 4, and 6 (0204060000) can be selected if interference issues occur with pattern 1, 3, and 5.
9. **CM EC6>0>0** Back up the programming and reset the MP.
10. **CM E53>XXX>1** Make all ZT's idle where XXX = the ZT No.

Programming Example for 8 ZTII-U's.

4CSIA LT00	SC03-B (08) LT01	4CSIA LT02	AP00-B LT03	8DLCP LT04	8DLCP LT05				
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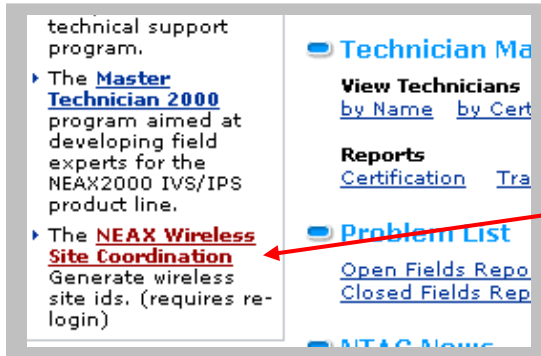
- | | |
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| <ol style="list-style-type: none"> 1. CM 050>08>23 2. CM 14>00000>EE3000 3. CM 14>00002>EE3001 4. CM 14>00008>EE3002 5. CM 14>00010>EE3003 6. CM 14>00016>EE3004 7. CM 14>00018>EE3005 8. CM 14>00024>EE3006 9. CM 14>00026>EE3007 10. CM 0618>0800>000 11. CM 0618>0801>002 12. CM 0618>0802>004 13. CM 0618>0803>006 14. CM AD00>000>00000 15. CM AD00>001>00001 16. CM AD00>002>00002 | <ol style="list-style-type: none"> 17. CM AD00>003>00003 18. CM AD00>004>00004 19. CM AD00>005>00005 20. CM AD00>006>00006 21. CM AD00>007>00007 22. CM AD19>000>00 <li style="padding-left: 40px;">CM AD19>007>00 23. CM AD24>000>00 <li style="padding-left: 40px;">CM AD24>007>00 24. CM AE00>03>003 25. CM AE15>00>0103050000 26. CM EC6>0>0 Reset MP 25. CM E53>000>1 <li style="padding-left: 40px;">CM E53>007>1 |
|--|---|

3. ZT Authorization

First back all CSI cards off the back plane on the PIM. If you have local power to the ZT's (via an AC plug in) this must be disconnected. Connect to the PBX with MATWorx and write down the first 6 digits of the CPU serial number from CM **F80>00**. If you are getting the System ID for an **existing** WCS system perform the following.

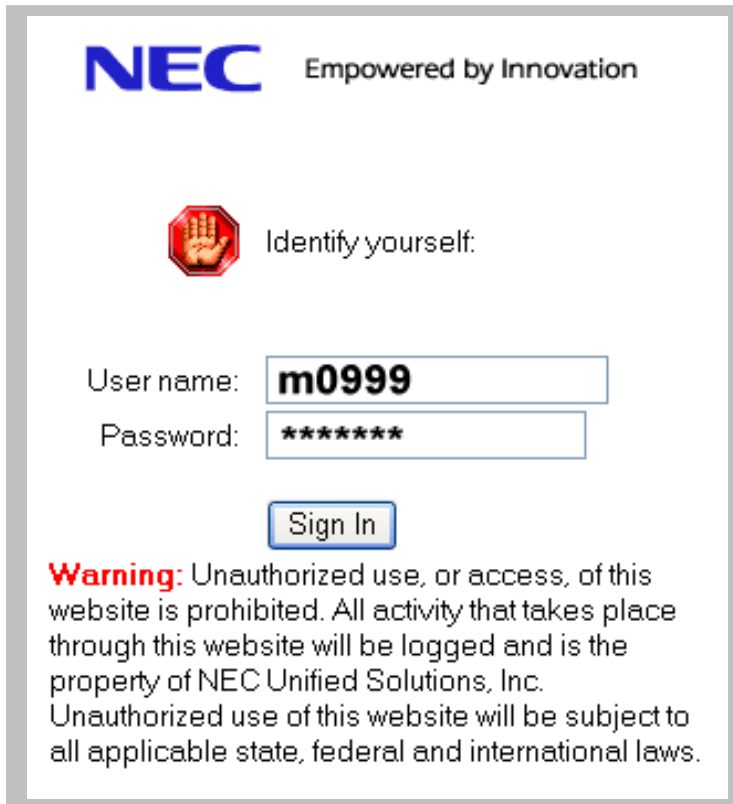
CM AE00>00>CCC
CM AE00>01>CCC

First make sure you have internet access and go to www.necntac.com



At the bottom left of the page you will find the link to the "NEAX Wireless Site Coordination"

To access this link you must enter your tech ID and password again.



The “NEAX WIRELESS SITE COORDINATION” page will show all the WCS sites authorized with your login ID. To create a new ID select the “**Create New ID**” link.

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Support

NEAX WIRELESS SITE COORDINATION

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Complete the form with the required information.

NEAX WIRELESS SITE COORDINATION FORM

Site Information

System Type: IVS2/IPS

Serial Number: 123456

Customer Name: The Test Company

Address: 123 Pass Road

City: Brokenville

State/Province: CA

ZIP/Postal Code: 90605

Associate Contact Information

Company: [Redacted]

Installation: The technician

Contact: 75039-2402 United States

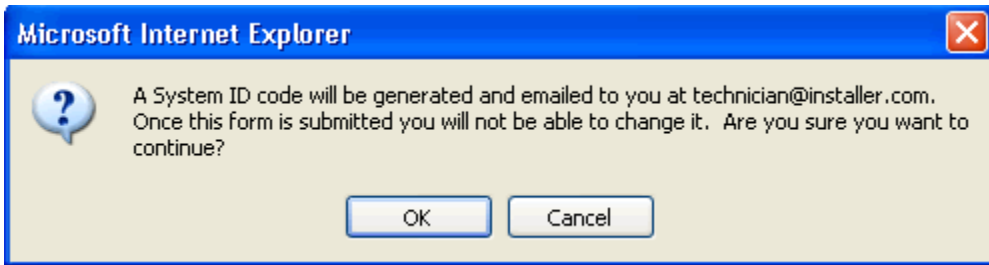
E-Mail: technician@installer.com

Submit

This is the 1st 6 digits of the CPU serial number in CM F80>00>

Your name and email address

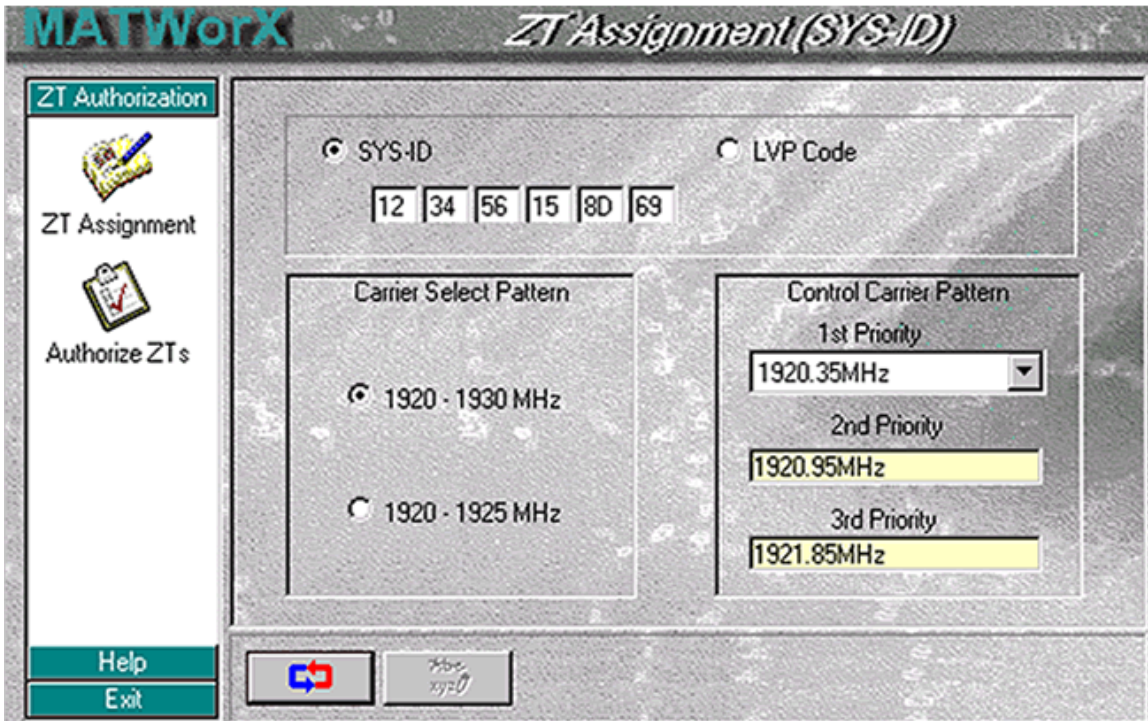
Once you select submit the following will appear. Select OK.



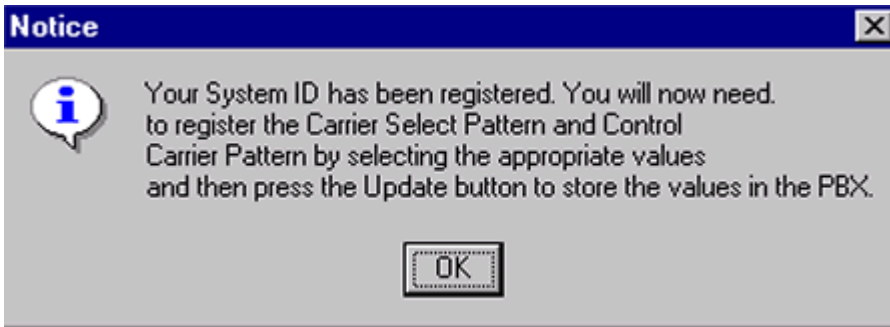
You will then be prompted with the new wireless ID. Write this down. The ID will also be emailed to the address you supplied on the previous screen.



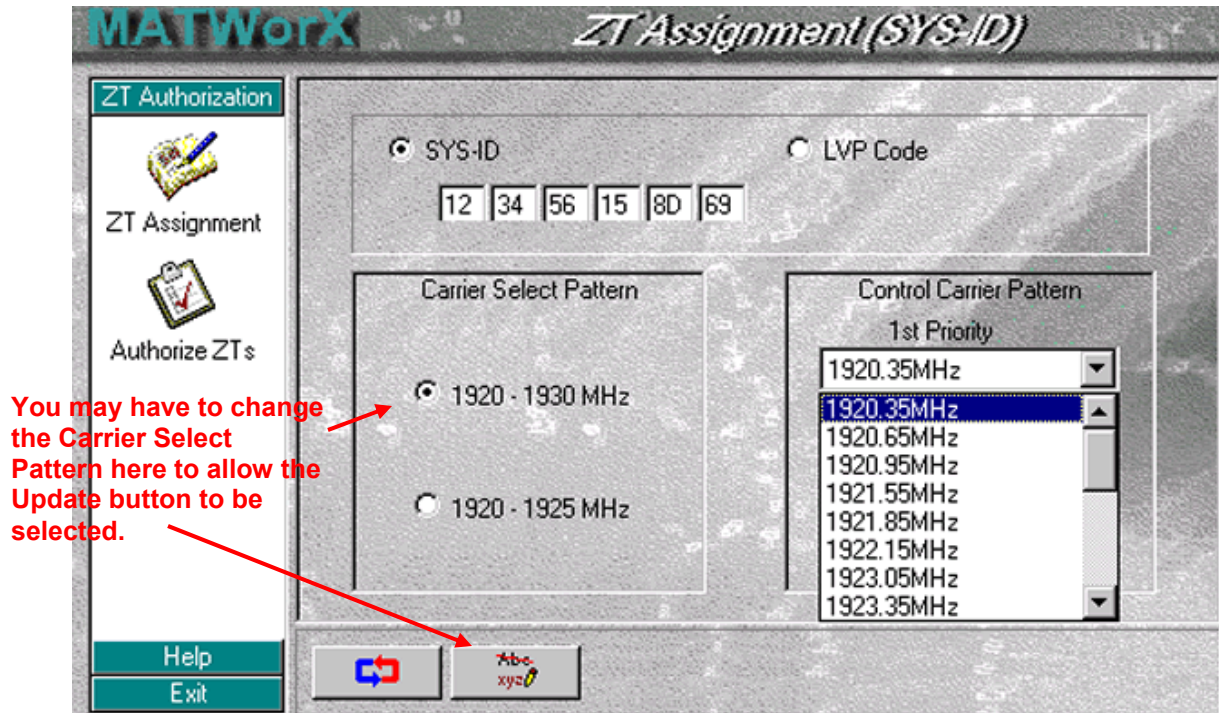
Connect to the PBX with MATWorx ver 10 or higher and go to "System" then select the "Wireless" add-in. Make sure the dot is in "SYS-ID" and enter the code you received from the procedure above. Then select the look-up button.



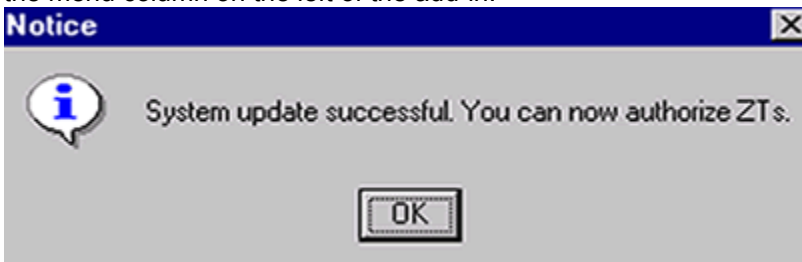
You will be prompted with **“System ID has not been registered. Do you wish to register System ID now?”**. Select **“Yes”**. If you do not get this prompt call the NEC NTAC for further support. Once the ID has been registered you will then see the following. Select **“OK”**.




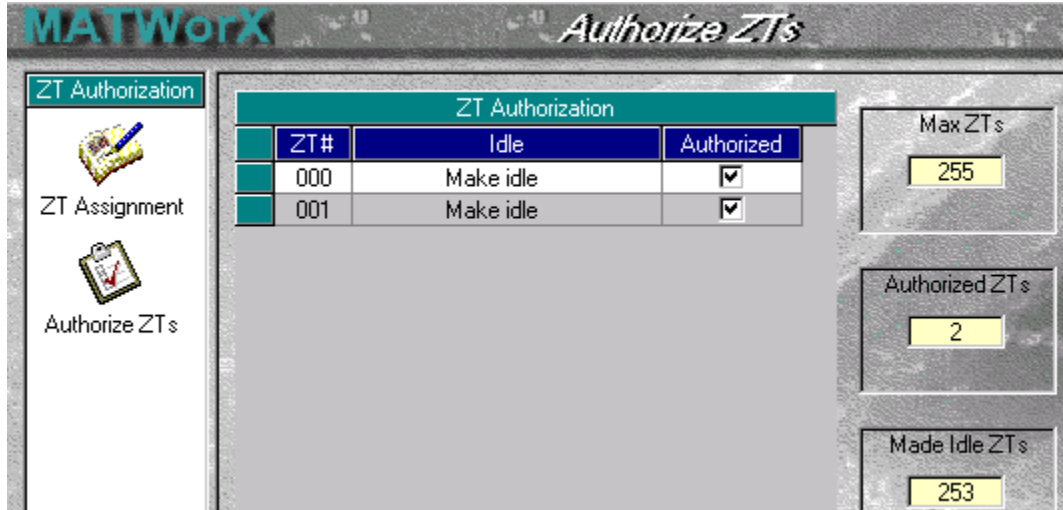
Make sure you select the Control Carrier Pattern assigned in step 8 of Wireless ZT Programming. Selecting 1920.35 is pattern 1, 3, 5 while 1920.65 is pattern 2, 4, 6. If you are Authorizing an existing system you must check CM AE15>01 to retrieve the correct pattern. If you select the wrong pattern the existing PS's will show **“NO SERVICE”** once ZT's are on line.



The Add-in will request you confirm the update of the **“Carrier Patterns”**. Select Yes. If the update is successful you will then select **“OK”** and then select the **“Authorize ZT's”** button in the menu column on the left of the add-in.



On the ZT Authorization page select the look up button  and the Add-in will authorize and then list out all ZT's. Confirm each ZT is "**Make idle**" and a *check* is in the "**Authorized**" column. At this point the CSI cards can be re-connected to the PIM back plane and the ZT's will come on line after a about 10 to 15 seconds. A ZT on line and idle will show 2 solid LED's and the If the "**STATUS**" LED is flashing check the wiring to the ZT.



Additional Programming/Trouble Shooting Tips

- If ZT's do not authorize check licensing in CM **F88>08>** for # of PS's (not available in later systems) and **CM F88>09>** for the number of ZT's. Default for these CMs is 4 and 2 respectively which means wireless operation is not available. For WCS Key Keeper Option 150616 must be loaded (F88>09>0128). For WCS Demo Systems (2 ZT's only) Key Keeper option 150617 must be loaded. Also **CM F83>0>0** must be confirmed.
- Always have one ZT in the phone room to connect directly to the PBX LTC cable termination. This will take any possible cabling issues, including transient RF cable interference, out of the picture when trying to bring the ZT's on line.
- Always program and authorize all ports (even number of ZT's) even if there is no hardware to be connected. This way if an additional ZT is required it need only be cabled, mounted, and then cross connected.
- Triple check the wiring to the jack. 75% of the time a flashing "**STATUS**" light on the ZT is caused by bad wiring to the ZT.
- Always try to have all ZT's at the same revision. ZT revisions can be confirmed from the **ZT Program Download** add-in. This is located under **Upgrade**. In this add-in select the highest revision ZT and use it as the master ZT and download it's revision to the other ZT's of lower revision.